

Listing of Claims

1. (currently amended) In a vehicle detector having circuitry powered by a source of electrical power for sensing changes in an associated inductive loop related to the presence of a vehicle in the vicinity of the loop and for generating a Call signal in response to such changes; the improvement comprising means for automatically performing a loop check for the associated inductive loop, said means for automatically performing a loop check including a separate check loop located adjacent said inductive loop and switch means for selectively coupling said check loop to said vehicle detector, said vehicle detector including means for periodically activating said switch means to couple said check loop to said vehicle detector, means for activating said check loop to simulate a vehicle load on said inductive loop when said check loop is coupled to said vehicle detector, and means for determining the inductance value of said inductive loop when said check loop is activated.

2. (cancelled)

3. (original) The invention of claim 1 wherein said vehicle detector is a multi channel detector having circuitry for generating Call signals for each channel; and wherein said means for automatically performing a loop check includes means for performing a loop check on each said channel.

4. (original) The invention of claim 1 wherein said means for automatically performing a loop check includes means for displaying the result of a loop check.

5. (currently amended) The invention of claim 1 wherein said means for automatically performing a loop check includes additional testing circuitry for performing an iterative loop integrity test on an inductive loop which failed the loop check.

9 6. (currently amended) A method of testing the integrity of an inductive loop in a vehicle detector system; the method including the steps of periodically activating a check loop positioned adjacent the inductive loop to simulate a vehicle load on the inductive loop, and comparing values representative of inductive loop inductance values measured during different activation periods of the check loop with a preselected threshold value to determine the integrity of the inductive loop, and determining an initial inductive loop failure when a measured inductive loop inductance value exceeds the threshold value.

10 7. (currently amended) The method of claim 9 6 further including the step of performing an iterative inductive loop integrity test when an initial inductive loop failure is determined.

11 8. (currently amended) The method of claim 10 7 wherein said step of performing an iterative inductive loop integrity test includes the steps of:

- (a) establishing a maximum number of iterative inductive loop checks;
- (b) establishing the time between successive iterative inductive loop checks; and
- (c) performing successive iterative inductive loop checks by
 - (i) activating the check loop,
 - (ii) measuring the inductance of the inductive loop and
 - (iii) comparing the measured inductance with the threshold value until the inductive loop has either failed the maximum number of iterative inductive loop checks or the inductive loop has not failed one of the iterative inductive loop checks.

12 9. (currently amended) The method of claim 11 8 wherein said step (b) of establishing includes the step of varying the time between successive iterative inductive loop checks.

13 10. (currently amended) The method of claim 12 9 wherein the time between successive iterative inductive loop checks is decreased after each loop check.

6 11. (currently amended) The invention of claim 5 wherein said additional circuitry includes means for determining an initial loop check failure, means for establishing a maximum number of iterative loop checks, timer means for establishing the time between successive iterative loop checks, means for enabling said iterative loop integrity test after said initial loop check failure, fail means for determining whether said inductive loop fails a given iterative loop check, and iterative loop check stop means for terminating said iterative loop integrity test when said fail means determines that said inductive loop failed said maximum number of successive loop checks.

7 12. (currently amended) The invention of claim 6 11 wherein said iterative loop check stop means further includes means for terminating said iterative loop integrity test when said fail means determines that said inductive loop did not fail one of said successive loop checks.

8 13. (currently amended) The invention of claim 6 11 wherein said timer means includes means for varying the time between successive iterative loop checks.